AF
DFW

IN THE UNI1450TED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): LEE, Ju-Ho et al.

Examiner: HERRERA, Diego D.

Serial No.: 10/777,431

Group Art Unit: 2617

Filed: February 12, 2004

Docket: 678-1352 (P11800)

For: **SCHEDULING APPARATUS AND METHOD IN A CDMA MOBILE COMMUNICATION SYSTEM**

Dated: February 26, 2007

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313

TRANSMITTAL OF APPELLANTS' BRIEF ON APPEAL

Sir:

Enclosed please find APPELLANTS' BRIEF.

Also enclosed is a check in the amount of $500.00 to cover the appeal fee.

If the enclosed check is insufficient for any reason or becomes detached, please charge the required fee under 37 C.F.R. §1.17 to Deposit Account No. 50-4053. Also, in the event any additional extensions of time are required, please treat this paper as a petition to extend the time as required and charge Deposit Account No. 50-4053. TWO COPIES OF THIS SHEET ARE ENCLOSED.

Respectfully submitted,

Paul J. Farrell
Reg. No.: 33,494
Attorney for Applicant(s)

THE FARRELL LAW FIRM
333 Earle Ovington Blvd., Suite 701
Uniondale, New York 11553
516-228-3565

CERTIFICATE OF MAILING 37 C.F.R. §1.8(a)

I hereby certify that this correspondence (and any document referred to as being attached or enclosed) is being deposited with the United States Postal Service as first class mail, postage paid in an envelope addressed to: Commissioner for Patents, Alexandria, VA 22313-1450, Mail Stop Appeal Brief-Patents on February 26, 2007.

Dated: February 26, 2007

Michael J. Musella

Attorney Docket: 678-1352

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

APPLICANT(S): LEE, Ju-Ho et al. **ART UNIT:** 2617

SERIAL NO.: 10/777,431 **EXAMINER:** HERRERA, Diego D.

FILING DATE: February 12, 2004 **DATED:** February 26, 2007

FOR: **SCHEDULING APPARATUS AND METHOD IN A CDMA MOBILE COMMUNICATION SYSTEM**

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

REAL PARTY IN INTEREST

The real party in interest is Samsung Electronics Co, Ltd, the assignee of the subject application, having an office at 416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea.

RELATED APPEALS AND INTERFERENCES

To the best of Appellants' knowledge and belief, there are no currently pending related appeals, interferences or judicial proceedings.

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8 (a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postpaid in an envelope, addressed to the: Commissioner for Patents, Alexandria, VA 22313-1450, Mail Stop Appeal Brief-Patents on February 26, 2007.

Dated: February 26, 2007

Michael J. Musella

STATUS OF CLAIMS

Original Claims 1-32 were filed on February 12, 2004. Claims 6-14, 18, 20-22, 24 and 27-32 were amended, and Claims 4 and 5 were cancelled, in a Response filed May 3, 2006.

Thus, Claims 1-3 and 6-32 are pending in the Appeal. Claims 1, 14, 29 and 31 are in independent form. Claims 29-32 are allowed.[1] Claims 6-13 and 18-28 have been identified as containing allowable subject matter.

For the purposes of this appeal, Claims 1-3 stand or fall together and Claims 14-17 stand or fall together.

STATUS OF AMENDMENTS

All amendments that have been filed to date have been entered.[2] Thus, the Appendix to this Appeal Brief includes Claims 1-3 and 6-32, of which the status of Claims 6-14, 18, 20-22, 24 and 27-32 is indicated as "Previously Presented", the status of Claims 1-3, 15-17, 19, 23, 25 and 26 is indicated as "Original", and the status of Claims 4 and 5 is indicated as "Cancelled".

SUMMARY OF CLAIMED SUBJECT MATTER

The invention recited in Claim 1 relates to a method for transmitting packet data from a user equipment (UE) to Node Bs in a code division multiple access (CDMA) mobile communication

---

[1] It is noted that paragraph 7 of the Advisory Action dated December 15, 2006 lists the incorrect status of the claims. This error also appears in the Office Action dated July 27, 2006 in the Office Action Summary section in paragraphs 5-7. No rejections of Claims 29-32 are contained in the body of the July Office Action. On page 10 of the July Office Action in the Allowable Subject Matter section, Claims 29 (independent claim), 30 (dependent upon Claim 29) and 32 (dependent upon Claim 31) are listed as containing allowable subject matter, and Claim 31 (independent claim) is listed as allowed. Since Claim 29 is in independent form, and contains allowable subject matter, it therefore must be in condition for allowance. Further, since Claim 30 depends from Claim 29 and Claim 32 depends from Claim 31, these claims must also be in condition for allowance. Therefore, Appellants list Claims 29-32 as "allowed".

[2] Paragraph 3 and 7 of the Advisory Action dated December 15, 2006 incorrectly state that proposed amendments were filed after the final rejection, when in fact no amendments were filed after the final rejection. Also, paragraph 7 of the Advisory Action incorrectly states that Claims 4 and 5 were withdrawn from consideration, when in fact Claims 4 and 5 were cancelled in the Response filed May 3, 2006.

system, wherein a plurality of the Node Bs are adjacent to each other, and the UE is located in the soft handover region occupied by the Node Bs.

The method includes receiving scheduling commands transmitted from the Node Bs. (Specification at page 18, lines 7-13.)[3]

The method includes determining scheduling control information by combining weighted scheduling commands, which are determined considering weighting factors. (Specification at page 18, lines 7-13.)

The method further includes transmitting the packet data to the Node Bs according to the determined scheduling control information. (Specification at page 19, lines 25-29.)

The weighting factors are determined individually for the scheduling commands. (Specification at page 18, lines 9-11.)

The invention recited in Claim 14 relates to an apparatus for transmitting packet data from a user equipment (UE) to Node Bs in a code division multiple access (CDMA) mobile communication system, wherein a plurality of the Node Bs are adjacent to one each another, and the UE is located in the soft handover region occupied by the Node Bs.

The apparatus includes a scheduling command combiner for receiving scheduling commands transmitted from the Node Bs, and determining scheduling control information by combining weighted scheduling commands, which are determined considering weighting factors. (Specification at page 18, lines 7-13, FIG. 8.)

The apparatus further includes a packet transmitter for transmitting the packet data to the Node Bs according to the scheduling control information. (Specification at page 19, lines 25-29, FIG. 8.)

The weighting factors are determined individually for the scheduling commands. (Specification at page 18, lines 9-11.)

[3] Although a citation for each feature of the claims is provided herein, Applicants do not concede the fact that support may be found elsewhere in the written description.

GROUNDS FOR REJECTION TO BE REVIEWED ON APPEAL

Whether Claims 1, 2, 14 and 16 under 35 U.S.C. §103(a) are unpatentable over U.S. Publication 2003/0152097 (Makela) in view of U.S. Publication 2004/0116143 (Love).

Whether Claims 3, 15 and 17 under 35 U.S.C. §103(a) are unpatentable over Makela in view of Applicants' Admitted Prior Art (APA).

ARGUMENT

The Examiner rejected independent Claims 1 and 14 under 35 U.S.C. §103(a) as being unpatentable over Makela et al. in view of Love et al.

1. Independent Claim 1 is patentable over Makela in view of Love

Independent Claim 1 was said to be unpatentable over Makela in view of Love.

Claim 1 recites a method for transmitting packet data from a user equipment (UE) to Node Bs in a code division multiple access (CDMA) mobile communication system, wherein a plurality of the Node Bs are adjacent to each other, and the UE is located in the soft handover region occupied by the Node Bs. The method receives scheduling commands transmitted from the Node Bs. The method determines scheduling control information by combining weighted scheduling commands, which are determined considering weighting factors. The method transmits the packet data to the Node Bs according to the determined scheduling control information. The weighting factors are determined individually for the scheduling commands.

Makela discloses transmitting packet data.

Love discloses a method and apparatus for providing a distributed architecture digital wireless communication system.

1A. Since neither Makela nor Love teach or disclose a method for transmitting packet data from a UE to Node Bs that includes determining scheduling control information by combining weighted scheduling commands, which are determined considering weighting factors, the weighting factors being determined individually for the scheduling commands, neither reference, nor any combination thereof, can be used to render obvious Claim 1

Claim 1 recites a method for transmitting packet data from a UE to Node Bs. The method includes determining scheduling control information by combining weighted scheduling commands. The weighted scheduling commands are determined considering weighting factors. The weighting factors are determined individually for the scheduling commands.

Independent Claim 1 recites, in part, wherein the weighting factors are determined **individually** for the scheduling commands. [Emphasis added.] The Examiner cited Makela et al. at paragraph [0029] as disclosing this element.[4] Paragraph [0029] of Makela et al. states:

> [0029] In FIG. 2, separate send **queues** 21, 22 and 23 are assigned for each of the three traffic handling priorities in the interactive traffic class. The data packets are sent forward from the **queues** e.g. by using WFQ (Weighted Fair Queuing) method. The WFQ function 24 may be implemented such that the **weights of the queues** are configurable by the user of the network element (e.g. the operator of the network 2 or the user of the mobile station 1). The embodiments of the present invention enable dynamic adjustment of the **weights of the queues** in accordance with the number of the PDP contexts that are using the queues. The **weights of the queues** may be assigned and/or the dynamic changing of the weights is preferably implemented during the activation/deactivation of the PDP contexts i.e. the logical connections between the user 1 and the access point 16. By means of the dynamic adjustment of the weights the relative priorities of the data packets in the interactive traffic class may remain the same regardless of the number of the active PDP contexts. [Emphasis added.]

Since Claim 1 recites that the weighting factors are determined individually for the scheduling commands and Makela et al. recites that weights are determined, ***not individually***, but for the queues, Makela et al. cannot be used to render the Claims unpatentable. Love et al. does not cure this defect of Makela et al.

The Examiner responded to this argument by stating that assigning weights to data units as disclosed by Makela et al. is equivalent to individually assigning weights to scheduling commands as recited in Claim 1 of the present application.[5] Specifically, the Examiner states, "Makela et al. discusses that the method does in fact assign the weights to the queues of the plurality of transmission queues." Assigning weights to data units cannot be equated with assigning weights to scheduling commands.

The Examiner then states that Makela et al. adjusts its queue weights based on an amount of

---

[4] See Office Action dated July 27, 2006 at page 6, paragraph "c".

traffic, and goes on to opine that this somehow translates to the weighting factors are determined individually for the scheduling commands as recited in Claim 1.[6] The Examiner continues, "the weighting is determined individually for queues."[7] Again, based on Makela and based on the Examiner's own statements, weighting queues is not and cannot be equated with the weighting factors determined individually for the scheduling commands, as recited in Claim 1. Love does not cure these defects of Makela.

Since neither Makela nor Love, nor any combination thereof, disclose the recitation of Claim 1 of the present application, of a method for transmitting packet data from a UE to Node Bs that includes determining scheduling control information by combining weighted scheduling commands, which are determined considering weighting factors, the weighting factors being determined individually for the scheduling commands, Claim 1 cannot be rendered obvious by Makela in view of Love.

Based on at least the foregoing, reversal of the rejection of independent Claim 1 under §103(a) is respectfully requested.

1B. Independent Claim 1 is not rendered obvious by Makela in view of Love

The Examiner has failed to show that each and every element of Claim 1, and in as complete detail as is contained therein, are taught in or suggested by the prior art. The Examiner has failed to make out a prima facia case for an obviousness rejection, and thus Claim 1 is allowable.

2. Dependent Claims 2 and 3 are patentable over Makela in view of APA and/or Love

Without conceding the patentability per se of dependent Claims 2 and 3, these claims are likewise believed to be allowable by virtue of at least their dependence on Claim 1.

3. Independent Claim 14 is patentable over Makela in view of Love

Independent Claim 14 was said to be unpatentable over Makela in view of Love.

---

[5] See Office Action dated July 27, 2006, Response to Arguments section, at pages 2-4.
[6] See Office Action dated July 27, 2006, Response to Arguments section, at page 3, lines 8-12.
[7] See Office Action dated July 27, 2006, Response to Arguments section, at page 3, line 12.

Claim 14 recites an apparatus for transmitting packet data from a user equipment (UE) to Node Bs in a code division multiple access (CDMA) mobile communication system, wherein a plurality of the Node Bs are adjacent to one each another, and the UE is located in the soft handover region occupied by the Node Bs. The apparatus includes a scheduling command combiner for receiving scheduling commands transmitted from the Node Bs, and determining scheduling control information by combining weighted scheduling commands, which are determined considering weighting factors. The apparatus further includes a packet transmitter for transmitting the packet data to the Node Bs according to the scheduling control information. The weighting factors are determined individually for the scheduling commands.

Makela discloses transmitting packet data.

Love discloses a method and apparatus for providing a distributed architecture digital wireless communication system.

3A. Since neither Makela nor Love teach or disclose an apparatus for transmitting packet data from a UE to Node Bs that includes a scheduling command combiner for determining scheduling control information by combining weighted scheduling commands, which are determined considering weighting factors, the weighting factors are determined individually for the scheduling commands, neither reference, nor any combination thereof, can be used to render obvious Claim 14

Claim 14 recites an apparatus for transmitting packet data from a UE to Node Bs. The apparatus includes a scheduling command combiner for determining scheduling control information by combining weighted scheduling commands. The weighted scheduling commands are determined considering weighting factors. The weighting factors are determined individually for the scheduling commands.

Since these features are similar to features recited in Claim 1, the arguments set forth above in section 1A with respect to Claim 1 are also applicable to Claim 14.

Since neither Makela nor Love, nor any combination thereof, disclose the recitation of Claim 14 of the present application, of an apparatus for transmitting packet data from a UE to Node Bs that includes a scheduling command combiner for determining scheduling control information by combining weighted scheduling commands, which are determined considering weighting factors, the weighting factors are determined individually for the scheduling commands, Claim 14 cannot be

rendered obvious by Makela in view of Love.

Based on at least the foregoing, reversal of the rejection of independent Claim 14 under §103(a) is respectfully requested.

3B. Independent Claim 14 is not rendered obvious by Makela in view of Love

The Examiner has failed to show that each and every element of Claim 14, and in as complete detail as is contained therein, are taught in or suggested by the prior art. The Examiner has failed to make out a prima facia case for an obviousness rejection, and thus Claim 14 is allowable.

4. Dependent Claims 15-17 are patentable over Makela in view of APA and/or Love

Without conceding the patentability per se of dependent Claims 15-17, these claims are likewise believed to be allowable by virtue of at least their dependence on Claim 14.

CONCLUSION

As the Examiner has failed to make out a prima facie case for an obviousness rejection, the rejection of Claims 1-3 and 14-17 must be reversed.

It is well settled that in order for a rejection under 35 U.S.C. §103(a) to be appropriate, the claimed invention must be shown to be obvious in view of the prior art as a whole. A claim may be found to be obvious if it is first shown that all of the recitations of a claim are taught in the prior art or are suggested by the prior art. In re Royka, 490 F.2d 981, 985, 180 U.S.P.Q. 580, 583 (C.C.P.A. 1974), cited in M.P.E.P. §2143.03.

The Examiner has failed to show that all of the recitations of Claims 1-3 and 14-17 are taught or suggested by the either Makela or APA, or the combination thereof. Accordingly, the Examiner has failed to make out a prima facie case for an obviousness rejection.

Independent Claims 1-3 and 14-17 are not rendered unpatentable by either Makela, Love or APA, or any combination thereof. Therefore, the rejections of Claims 1-3 and 14-17 must be reversed.

Dated: February 26, 2007

By: _____
Paul J. Farrell
Reg. No.: 33,494
Attorney for Applicant

THE FARRELL LAW FIRM, P.C.
333 Earle Ovington Blvd., Suite 701
Uniondale, New York 11553
(516) 228-3565 (tel)
(516) 228-8475 (fax)

CLAIMS APPENDIX

1. (Original) A method for transmitting packet data from a user equipment (UE) to Node Bs in a code division multiple access (CDMA) mobile communication system, wherein a plurality of the Node Bs are adjacent to each other, and the UE is located in the soft handover region occupied by the Node Bs, the method comprising the steps of:

receiving scheduling commands transmitted from the Node Bs;

determining scheduling control information by combining weighted scheduling commands, which are determined considering weighting factors; and

transmitting the packet data to the Node Bs according to the determined scheduling control information,

wherein the weighting factors is determined individually for the scheduling commands.

2. (Original) The method of claim 1, wherein each of the plurality of weighting factors is determined considering a physical position and a cell size of each of the Node Bs by a radio network controller (RNC) for managing the Node Bs.

3. (Original) The method of claim 2, wherein as the cell size decreases, a higher weighting factor is applied.

4. (Cancelled)

5. (Cancelled)

6. (Previously Presented) The method of claim 1, wherein the step of determining the scheduling control information comprises the steps of:

comparing a random variable x, which is randomly generated within a range between 0 and k, with a threshold T_{send}, which is calculated based on a weighting factor corresponding to each of the Node Bs, where k is a maximum value of combined information values;

outputting a final scheduling grant value indicating transmission possibility of the packet data according to the comparison result;

multiplying maximum data rates of the Node Bs, which are provided as the scheduling commands by the weighting factors individually determined for the scheduling commands;

adding the maximum data rates multiplied by the weighting factors;

dividing the addition result by k, which a sum of the weighting factors; and

outputting the division result as a final maximum data rate.

7. (Previously Presented) The method of claim 1, wherein the step of determining the scheduling control information comprises the steps of:

calculating a combined information value by multiplying packet data allowability information bits of the Node Bs provided as the scheduling commands by the weighting factors, individually determined for the scheduling commands and adding up the multiplication results;

comparing the combined information value with a random variable x, which is randomly generated within a range between 0 and k-1;

outputting a final scheduling grant value indicating transmission possibility of the packet data according to the comparison result;

multiplying maximum data rates of the Node Bs provided as the scheduling commands by the weighting factors, individually determined for the scheduling commands;

adding the maximum data rates multiplied by the weighting factors; and

outputting the addition result as a final maximum data rate.

8. (Previously Presented) The method of claim 1, wherein the step of determining the scheduling control information comprises the steps of:

calculating a combined information value by multiplying packet data allowability information bits of the Node Bs provided as the scheduling commands by the weighting factors, individually determined for the scheduling commands and adding up the multiplication results;

comparing the combined information value with a threshold T_{send}, which is provided from a radio network controller (RNC);

outputting a final scheduling grant value indicating transmission possibility of the packet data according to the comparison result;

multiplying maximum data rates of the Node Bs provided as the scheduling commands by the weighting factors, individually determined for the scheduling commands;

adding the maximum data rates multiplied by the weighting factors; and

outputting the addition result as a final maximum data rate.

9. (Previously Presented) The method of claim 8, wherein if the combined information value is equal to or greater than the threshold T_{send}, the final scheduling grant value indicates that transmission of the packet data is possible, and if the combined information value is lower than the threshold T_{send}, the final scheduling grant value indicates that transmission of the packet data is impossible.

10. (Previously Presented) The method of claim 1, wherein the step of determining the scheduling control information comprises the steps of:

calculating a combined control command bit by multiplying control command bits of the Node Bs provided as the scheduling commands by the weighting factors, individually determined for the scheduling commands and adding up the multiplication results;

comparing the combined control command bit with an upper threshold T_{up} and a lower threshold T_{down};

outputting a final control command bit according to the comparison result;

controlling a used maximum allowed data rate according to the final control command bit; and

outputting the controlled maximum allowed data rate as a maximum allowed data rate for transmitting the packet data.

11. (Previously Presented) The method of claim 10, wherein the step of outputting the final control command bit comprises the steps of:

outputting the final control command bit for requesting an increase in the used maximum allowed data rate, if the combined control command bit is larger than the upper threshold T_{up};

outputting the final control command bit for requesting a hold of the used maximum allowed data rate, if the combined control command bit is not larger than the upper threshold T_{up} and is larger than the lower threshold T_{down}; and

outputting the final control command bit for requesting a decrease in the used maximum allowed data rate, if the combined control command bit is not larger than the lower threshold T_{down}.

12. (Previously Presented) The method of claim 10, wherein the weighting factors, individually determined for the scheduling commands, the upper threshold T_{up}, and the lower threshold T_{down} are provided through a radio resource control (RRC) message from a radio network controller (RNC) for managing the Node Bs.

13. (Previously Presented) The method of claim 10, wherein a sum of the weighting factors, individually determined for the scheduling commands is k.

14. (Previously Presented) An apparatus for transmitting packet data from a user equipment (UE) to Node Bs in a code division multiple access (CDMA) mobile communication system, wherein a plurality of the Node Bs are adjacent to one each another, and the UE is located in the soft handover region occupied by the Node Bs, the apparatus comprising:

a scheduling command combiner for receiving scheduling commands transmitted from the Node Bs, and determining scheduling control information by combining weighted scheduling commands, which are determined considering weighting factors; and

a packet transmitter for transmitting the packet data to the Node Bs according to the scheduling control information

wherein the weighting factors is determined individually for the scheduling commands.

15. (Original) The apparatus of claim 14, wherein the packet transmitter determines a transport format according to maximum data rate information included in the scheduling control information and a status of a data buffer storing the packet data, and transmits the packet data to the Node Bs according to the transport format, if it is determined from the scheduling control information that transmission of the packet data is possible.

16. (Original) The apparatus of claim 14, wherein each of the weighting factors is determined by a radio network controller (RNC) that manages the Node Bs, considering a physical position and a cell size of each of the Node Bs.

17. (Original) The apparatus of claim 16, wherein as the cell size decreases, a higher weighting factor is applied.

18. (Previously Presented) The apparatus of claim 14, wherein the scheduling command combiner comprises:

a scheduling grant value generator for (i) comparing a random variable x, which is randomly generated within a range between 0 and 1, with a threshold T_{send}, which is calculated based on a weighting factor corresponding to each of the Node Bs, where k is a maximum value of a combined information value, and (ii) outputting a final scheduling grant value indicating transmission possibility of the packet data according to the comparison result; and

a maximum data rate generator for multiplying maximum data rates of the Node Bs, which are provided as the scheduling commands by the weighting factors, individually determined for the scheduling commands, adding the maximum data rates multiplied by the weighting factors, and outputting the addition result as a final maximum data rate.

19. (Original) The apparatus of claim 18, wherein the scheduling grant value generator outputs the final scheduling grant value indicating that transmission of the packet data is possible, if the random variable x is at least equal to the threshold T_{send}, and outputs the final scheduling grant value indicating that transmission of the packet data is impossible, if the random variable x is smaller than the threshold T_{send}.

20. (Previously Presented) The apparatus of claim 14, wherein the scheduling command combiner comprises:

a scheduling grant value generator for comparing a random variable x, which is randomly generated within a range between 0 and k, with a threshold T_{send}, which is calculated based on a

weighting factor corresponding to each of the Node Bs, where k is a maximum value of a combined information value, and outputting a final scheduling grant value indicating transmission possibility of the packet data according to the comparison result; and

a maximum data rate generator for multiplying maximum data rates of the Node Bs, which are provided as the scheduling commands by the weighting factors, individually determined for the scheduling commands, adding the maximum data rates multiplied by the weighting factors, dividing the addition result by k, and outputting the division result as a final maximum data rate.

21. (Previously Presented) The apparatus of claim 14, wherein the scheduling command combiner comprises:

a scheduling grant value generator for calculating a combined information bit by multiplying packet data allowability information bits of the Node Bs, which are provided as the scheduling commands by the weighting factors, individually determined for the scheduling commands, adding the addition results, comparing the combined information bit with a random variable x, which is randomly generated within a range between 0 and k-1, and outputting a final scheduling grant value indicating transmission possibility of the packet data according to the comparison result; and

a maximum data rate generator for multiplying maximum data rates of the Node Bs, which are provided as the scheduling commands by the weighting factors, individually determined for the scheduling commands, adding the maximum data rates multiplied by the weighting factors, and outputting the addition result as a final maximum data rate.

22. (Previously Presented) The apparatus of claim 14, wherein the scheduling command combiner comprises:

a scheduling grant value generator for calculating a combined information bit by multiplying packet data allowability information bits of the Node Bs, which are provided as the scheduling commands by the weighting factors, individually determined for the scheduling commands, adding the multiplication results, comparing the combined information bit with a threshold T_{send} provided from a radio network controller (RNC), and outputting a final scheduling grant value indicating transmission possibility of the packet data according to the comparison result; and

a maximum data rate generator for multiplying maximum data rates of the Node Bs, which are provided as the scheduling commands by the weighting factors, individually determined for the scheduling commands, adding the maximum data rates multiplied by the weighting factors, and outputting the addition result as a final maximum data rate.

23. (Original) The apparatus of claim 22, wherein the scheduling grant value generator outputs the final scheduling grant value for indicating that transmission of the packet data is possible, if the combined information bit is at least equal to the threshold T_{send}, and outputs the final scheduling grant value for indicating that transmission of the packet data is impossible, if the combined information bit is lower than the threshold T_{send}.

24. (Previously Presented) The apparatus of claim 14, wherein the scheduling command combiner comprises:

a plurality of multipliers for multiplying control command bits of the Node Bs, which are provided as the scheduling commands by the weighting factors, individually determined for the scheduling commands;

an adder for adding the control command bits multiplied by the weighting factors, and outputting a combined control command bit; and

a comparator for comparing the combined control command bit with an upper threshold T_{up} and a lower threshold T_{down}, and outputting a final control command bit according to the comparison result.

25. (Original) The apparatus of claim 24, further comprising:

a memory for storing a maximum allowed data rate used for transmitting previous packet data; and

an allowed data rate calculator for reading the previously used maximum allowed data rate from the memory, controlling the previously used maximum allowed data rate according to the final control command bit, and outputting a final allowed data rate for transmitting the packet data.

26. (Original) The apparatus of claim 25, wherein the comparator (i) outputs the final control command bit for requesting an increase in the previously used maximum allowed data rate, if the combined control command bit is larger than the upper threshold T_{up}, (ii) outputs the final control command bit for requesting a hold of the previously used maximum allowed data rate, if the combined control command bit is not larger than the upper threshold T_{up} and is larger than the lower threshold T_{down}, and (iii) outputs the final control command bit requesting a decrease in the previously used maximum allowed data rate, if the combined control command bit is not larger than the lower threshold T_{down}.

27. (Previously Presented) The apparatus of claim 24, wherein the weighting factors, individually determined for the scheduling commands, the upper threshold T_{up}, and the lower threshold T_{down} are provided through a radio resource control (RRC) message from a radio network controller (RNC) for managing the Node Bs.

28. (Previously Presented) The apparatus of claim 24, wherein a sum of the weighting factors, individually determined for the scheduling commands is k.

29. (Previously Presented) A method for applying at least one of a plurality of weighting factors for each of a plurality of cells by a radio network controller (RNC) that manages the plurality of cells so that a user equipment (UE) located in a soft handover region can transmit packet data according to scheduling commands from the plurality of cells considering the weighting factors, in a code division multiple access (CDMA) mobile communication system, wherein a plurality of the cells are adjacent to each other, and the UE is located in the soft handover region occupied by the cells, the method comprising the steps of:

calculating each of the plurality of weighting factors to be in inverse proportion to a radius of each of the plurality of cells, taking into consideration a number of the cells; and

transmitting the weighting factors individually calculated for the cells to the UE through a radio resource control (RRC) message.

30. (Previously Presented) The method of claim 29, wherein a weighting factor for a particular cell can be calculated to be proportional to a signal strength of the particular cell in addition to the radius r_i of each of the plurality of cells.

31. (Previously Presented) A method for applying a weighting factor for a cell by a radio network controller (RNC) that manages a plurality of cells so that a user equipment (UE) located in a soft handover region can transmit packet data according to scheduling commands from the plurality of cells considering a plurality of weighting factors, in a code division multiple access (CDMA) mobile communication system, wherein a plurality of the cells are adjacent to each other, and the UE is located in the soft handover region occupied by the cells, the method comprising the steps of:

receiving from the UE a path loss γ_i, which is determined according to a strength of a common pilot signal measured for each of the plurality of cells;

calculating the plurality of weighting factors by dividing a particular value k by the path loss γ_l of each of the plurality of cells; and

transmitting the weighting factors individually calculated for each of the plurality of cells to the UE through a radio resource control (RRC) message.

32. (Previously Presented) The method of claim 31, wherein a weighting factor for a particular cell can be calculated to be proportional to a signal strength the particular cell in addition to the path loss γ_l of the plurality of cells.

EVIDENCE APPENDIX

There is no evidence submitted pursuant to 37 C.F.R. 1.130, 1.131, 1.132 or entered by the Examiner and relied upon by Appellant.

RELATED PROCEEDINGS APPENDIX

There are no known decisions rendered by a court or the Board in any proceeding identified pursuant to paragraph (c)(1)(ii) of 37 C.F.R. 41.37.

PTO/SB/82 (01-06)
Approved for use through 12/31/2006 OMB 0651-0035
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number

REVOCATION OF POWER OF ATTORNEY WITH NEW POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS

Application Number	10/777,431
Filing Date	
First Named Inventor	
Art Unit	
Examiner Name	
Attorney Docket Number	678-1352

I hereby revoke all previous powers of attorney given in the above-identified application.

☐ A Power of Attorney is submitted herewith.

OR

☒ I hereby appoint the practitioners associated with the Customer Number: 66547

☒ Please change the correspondence address for the above-identified application to:

☒ The address associated with Customer Number: 66547

OR

☐ Firm or Individual Name			
Address			
City		State	Zip
Country			
Telephone		Email	

I am the:

☐ Applicant/Inventor

☒ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

SIGNATURE of Applicant or Assignee of Record

Signature		
Name	Jong Yong Yun, President of Samsung Electronics Co., Ltd.	
Date	16. Nov. 2006	Telephone

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☐ *Total of _____ forms are submitted